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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/445,617 12/08/99 LEMIEUX

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EXAMINER

IM52/1004

HARNESS DICKEY & PIERCE
PO BOX 828
BLOOMFIELD HILLS MI 48303

JUSKA, C
ART UNIT PAPER NUMBER

1771
DATE MAILED:

10/04/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/445,617

Applicant(s)
Lemieux

Examiner
Cheryl Juska

Art Unit
1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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DETAILED ACTION

Response to Amendment

1. Preliminary Amendment A, submitted as Paper No. 3 on December 8, 1999, has been entered. The abstract has been replaced as requested.

Information Disclosure Statement

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: Reference number 10 of Figure 1 is not described in the specification. Correction is required.

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Specification

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification does not provide support for the embodiments recited in claims 3-6.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 3-6, and 8-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 1 is indefinite for the use of the terms "grass-type" and "blade-like." Said terms are indefinite because the it is unclear what the scope of the claim is due to those elements encompassed by "-type" and "-like" but which are not actually disclosed by the specification. Claims 9 and 10 are similarly rejected for the use of the terms "sand-like" and "adhesive-like," respectively.

8. The terms "closely" and "densely" in claim 1 are relative terms which render the claim indefinite. The terms are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably

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apprised of the scope of the invention. Claim 1 is additionally rejected for the use of the relative terminology "firm" and "relatively thick." Claim 9 is similarly rejected for the use of the terms "fine" and "densely."

9. Regarding claims 1 and 10, the phrase "such as" renders the claims indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

10. Regarding claims 1 and 8, the phrases "and similar...playing surfaces" and "or the like" render the claims indefinite because the claims include elements not actually disclosed (those encompassed by "and similar...playing surfaces" and "or the like"), thereby rendering the scope of the claims unascertainable. See MPEP § 2173.05(d).

11. Claim 6 is indefinite for the use of the phrase "in the range of approximately 1.9 pounds per cubic foot." A recitation to a single value does not constitute a "range."

12. Claims 3-6 are indefinite because it is unclear if the recited densities describe the polypropylene *bead* material before molding into a sheet or the molded underpad made from said polypropylene beads. Additionally, it is unclear in claims 3 and 4 if the thickness describes the underpad or the beads.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,505,960 issued to Leffingwell in view of US 4,830,798 issued to Maeda.

Claim 1 is written in as Jepson claim, wherein the limitations of the preamble clause are admitted to be known in the art and 'the improvement' clause describing the invention. Thus, the claimed synthetic turf surface comprising (a) a synthetic grass carpet having pile strands attached to a base sheet and (b) a resilient, cushioning underpad is understood to be well-known in the art. This is also evidenced by the cited Leffingwell patent, which teaches an artificial turf comprising a pile layer adhesively attached to a cushioning layer (col. 1, line 60-col. 2, line 3). Leffingwell also teaches the importance of artificial turf underpadding to be cushioning and shock-absorbent, as well as water resistant, chemical resistant, and compression set resistant (col. 2, lines 3-40).

The present invention lies in the material employed for the underpad. Specifically, a molded sheet of expanded polypropylene beads. Foam moldings of pre-expanded polypropylene beads are also known in the art, as evidenced by the cited Maeda patent (abstract). Maeda teaches said foam moldings are have excellent compressive strength, heat resistance, strain recovery after compression, and shock absorption (col. 1, lines 9-14 and 16-26).

Thus, it would have been obvious to one of ordinary skill in the art to substitute a known shock-absorbing foam padding, as taught by Maeda, for the foam padding of the Leffingwell invention, since it has been held to be within the general skill of a worker in the art to select a

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known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. Therefore, claims 1 and 10 are rejected as being obvious over the cited Leffingwell and Maeda patents.

15. Claims 2-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Leffingwell and Maeda patents, as applied to claim 1 above, and further in view of US 4,931,477 issued to Shiiki et al and US 5,035,275 issued to Yamaguchi.

Claims 2-6 limit the density of said beads and the thickness of said underpad. Claims 7 and 8 limit the density and thickness of the molded underpad.

Leffingwell teaches an underpad having an overall thickness ranging from about 6 to 50 mm (0.23 to about 2 inches) (col. 4, lines 16-22). Maeda does not explicitly teach densities of the polypropylene beads or the molded foam articles. However, the presently claimed densities are not novel to the art. For example, Shiiki teaches polypropylene bead densities ranging from 0.0090-0.0930 g/cc (0.56 to 5.8 lb/ft³) (col. 4, lines 9-20). Yamaguchi teaches the density of a molded foam article made from expanded beads is dependent upon its intended use, but that most are preferably from about 0.010 to 0.050 g/cc (0.62 to 3.12 lb/ft³) (col. 4, lines 19-23). Thus, the limitations of claims 2-8 are rejected as being obvious to one of ordinary skill in the art.

Specifically, it would have been obvious to choose a known polypropylene bead material with the claimed density based upon its suitability for its intended use. Additionally, it would have been obvious to mold said polypropylene beads into a foam article having the claimed thickness and density based upon the desired requirements of the final product.

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With respect to the limitations of claims 3-6 and 8 wherein the embodiments are stated to form particular artificial turf applications (i.e., golf green, tennis court, etc.), it is asserted that said limitations are recitations of the intended use of the claimed invention. Intended use recitations must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

16. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Leffingwell and Maeda patents, as applied to claim 1 above, and further in view of US 5,373,667 issued to Lemieux.

Neither Leffingwell nor Maeda teach the limitations of claim 9. However, the shredding of the upper ends of strands of artificial grass by sand-blasting and the simultaneous filling of the interstices between said strands and below said shredded strands is well-known in the art of artificial turf. Specifically, Lemieux teaches the limitations of claim 9 at the abstract and col. 3, lines 29-63. Therefore, claim 9 is rejected in that it would have been obvious to one of ordinary skill to shred the artificial grass strands by sand-blasting in order to enhance the playing surface of the artificial turf.


17. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Leffingwell and Maeda patents, as applied to claim 1 above, and further in view of US 5,820,475 issued to Luna.

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Neither Leffingwell nor Maeda teach the limitations of claim 11. However, the formation of slits in artificial turf for the placement of a golf tee is well-known in the art. Specifically, Luna teaches the limitations of claim 11 at col. 1, lines 5-10. Therefore, claim 11 is rejected in that it would have been obvious to one of ordinary skill to form holes in the artificial turf in order to enable the use of said turf as a golf tee-off green.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Cheryl Juska whose telephone number is (703) 305-4472. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Terrel Morris, can be reached at (703) 308-2414. The official fax number for this TC 1700 is (703) 872-9310 and, for After Final communications, (703) 872-9311.


CHERYL A. JUSKA
PRIMARY EXAMINER

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September 27, 2001